CLAIMS:

1. An active matrix display (1) comprising

a pixel (P) including sub-pixels (10), and

a drive circuit (6) receiving an input signal (IV) determining a desired luminance (BR) and a desired color (AC) of the pixel (P), the drive circuit (6) comprising

means (3) for determining whether the desired luminance (BR) is below a predetermined level (VT), and

means (4) for, when the desired luminance (BR) is below the predetermined level (VT),

changing a number of the sub-pixels (10) contributing to the desired luminance (BR) into a lower number than optimally required to obtain the desired color (AC), and

increasing a level of at least one of said contributing sub-pixels (10) to obtain a higher luminance of this one of said contributing sub-pixels (10) than if all the sub-pixels (10) required to obtain the desired color (AC) would contribute to the desired luminance (BR).

2. An active matrix display as claimed in claim 1, wherein the pixel (P) comprises three sub-pixels (10) generating light having different colors.

3. An active matrix display as claimed in claim 1, wherein the pixel (P) comprises more than 3 sub-pixels (10) generating light having different colors.

4. An active matrix display as claimed in claim 1, wherein the means (4) for changing the number of sub-pixels (10) is arranged for selecting only a single one of the sub-pixels (10) to contribute to the desired luminance (BR) when the desired luminance (BR) is below the predetermined level (VT).

5. An active matrix display as claimed in claim 1, wherein the means (3) for determining whether the desired luminance (BR) is below a predetermined level (VT1) is

arranged for further determining whether the desired luminance (BR) is below a further predetermined level (VT2), the means (4) for changing the number of the sub-pixels (10) contributing to the desired luminance (BR) into a lower number than optimally required to obtain the desired color (AC), selecting the lower number below the further predetermined level (VT2) to be lower than below the first mentioned predetermined level (VT1).

6. An active matrix display as claimed in claim 1, wherein the means (4) for changing the number of sub-pixels (10) is arranged for determining the contributing sub-pixels (10) out of the available sub-pixel colors (R, G, B) to obtain a color nearest to the desired color (AC).

7. An active matrix display as claimed in claim 3, wherein one of the sub-pixels (10) is arranged for generating white (W) light.

8. An active matrix display as claimed in claim 7, wherein the means (4) for changing the number of sub-pixels (10) is arranged for selecting only the sub-pixel (10) generating the white light to contribute when the desired luminance (BR) is below the predetermined level (VT).

9. An active matrix display as claimed in claim 1, further comprising

a further pixel (P) including further sub-pixels (10) and being arranged adjacent to the first mentioned pixel (P),

the means (4) for changing the number of sub-pixels (10) is arranged for driving only a subset of the first mentioned sub-pixels (10) and only a subset of the further sub-pixels (10), the subset of the first mentioned sub-pixels (10) and the subset of the further sub-pixels (10) being selected to obtain a perceived combined color being substantially an average of the desired color (AC) of the first mentioned pixel (10) and a desired color (AC) of the further pixel (10), and to obtain substantially the desired luminance (BR) when the desired luminance (BR) of at least one of the first mentioned pixel (10) or further pixel (10) is below the predetermined level (VT).

10. An active matrix display as claimed in claim 9, wherein the subset of the first mentioned sub-pixels (10) and the subset of the further sub-pixels (10) have different colors.

11. An active matrix display as claimed in claim 9, wherein the active matrix display further comprises a third pixel (P) adjacent to the first mentioned pixel (P), both the first mentioned pixel (P), the further pixel (P), and the third pixel (P) comprises a red (R), green (G) and blue (B) sub-pixel (10), the means (4) for changing the number of sub-pixels (10) being arranged for driving only: the red (R) sub-pixel (10) of the first mentioned at least one pixel (P), the green (G) sub-pixel (10) of the further pixel (P), and the blue (B) sub-pixel (10) of the third pixel (P) when the desired luminance (BR) is below the predetermined level (VT).

12. An active matrix display as claimed in claim 11, wherein the red (R) sub-pixel (10) of the first mentioned at least one pixel (P), the green (G) sub-pixel (10) of the further pixel (P), and the blue (B) sub-pixel (10) of the third pixel (P) are driven to obtain white light.

13. An active matrix display as claimed in claim 1, wherein the pixel (P) comprises a red (R), green (G), blue (B), magenta, yellow, and cyan sub-pixel (10), and wherein the means (4) for changing the number of sub-pixels (10) is arranged for only selecting one of the sub-pixels (10) to contribute if its luminance is above an associated predetermined level (VT).

14 An active matrix display as claimed in claim 1, wherein the matrix display comprises one of: a polymer light emitting display, an organic light emitting display, a liquid crystal display, a plasma display or a field emission display.

15. Method of displaying an image on an active matrix display comprising a pixel (P) including sub-pixels (10), the method comprises receiving (6) an input signal (IV) determining a desired luminance (BR) and a desired color (AC) of the pixel (P), the receiving (6) comprising

determining (3) whether the desired luminance (BR) is below a predetermined level (VT), and when the desired luminance (BR) is below the predetermined level (VT):

changing (4) a number of the sub-pixels (10) contributing to the desired luminance (BR) into a lower number than optimally required to obtain the desired color (AC), and

increasing (4) a level of at least one of said contributing sub-pixels (10) to obtain a higher luminance of this one of said contributing sub-pixels (10) than if all the sub-pixels (10) required to obtain the desired color (AC) would contribute to the desired luminance (BR).